

which a structure has been observed, of which no other animal is as yet known to partake.

In cutting through the eye, four processes were met with, arising by distinct tendons from the internal or posterior portion of the sclerotic, which, passing forward, gradually became broader, and insensibly lost themselves in and formed a part of the choroid. These processes had a muscular appearance. The ciliary processes were affixed to the crystalline lens, which was nearly spherical, with the anterior surface somewhat flattened.

Concerning the use of this structure, especially of the processes, the author observes, that as the natural unwieldiness of this animal probably unfits it for quickly directing its sight to objects which for its own preservation it ought to be able to examine easily and minutely, nature seems to have supplied it with an apparatus calculated to remedy this imperfection. The change in the eye, which adapts it for distinct vision at different distances, the author ascribes in a great measure to the four above-mentioned processes, which upon contracting will shorten the axis of the eye, and produce the desired effect: for near objects, it is observed that this animal has the eyes placed much nearer the mouth than any other, whence, without any adaptation of the eye, it is capable of performing the most essential of its functions, viz. that of examining the food necessary for its subsistence.

*Demonstration of a Theorem, by which such Portions of the Solidity of a Sphere are assigned as admit an algebraic Expression.* By Robert Woodhouse, A.M. Fellow of Caius College, Cambridge. Communicated by Joseph Planta, Esq. Sec.R.S. Read February 12, 1801. [*Phil. Trans.* 1801, p. 153.]

In the second volume of the Memoirs of the National Institute, M. Bossut announces a theorem relative to the solidity of a sphere similar to Viviani's, by which quadrable portions of a hemispherical vault are assigned. M. Bossut withholds the analysis that led him to his result, but mentions that it involves an integration much more complicated than that which occurs in Viviani's problem. In the present paper, Mr. Woodhouse furnishes the analysis that leads to the result announced in Bossut's theorem, and, by a transformation of the co-ordinates of the sphere, arrives at a differential expression, the integration of which does not appear more complicated than that employed in the solution of Viviani's problem.

*Account of the Discovery of Silver in Herland Copper Mine.* By John Hawkins, Esq. Communicated by the Right Hon. Sir Joseph Banks, Bart. K.B. P.R.S. Read February 12, 1801. [*Phil. Trans.* 1801, p. 159.]

This ore was found in the Herland mine, about six miles from St. Michael's Mount in Cornwall. It consists chiefly of lodes of